ever, the advertisement is false and known to be false and is a studied effort to impose upon the credulity of the public for gain, the law is otherwise."

Advertising treatment or cure of venereal or sexual diseases is, perhaps, the most difficult division of the law in which to get a conviction. Of course, the venereal part is plain, but what constitutes a sexual disease? Which organs are sexual organs? Except the advertising matter is plain and without attempt at subterfuge, even though the board sees the intent, it is difficult to convince a court on a writ of review that the language is anything more than is ordinarily used in the professional cards of the urologists. There seems no way to write the law more plainly or more specifically. We must struggle along and endeavor to furnish such testimony to the fact and such expert testimony as to convince the court we are right in our judgment and discipline.

Fifth: Habitual intemperance. No duty confronting the board is so unpleasant as to discipline a professional brother who is guilty of intemperance. It is indeed a sad undertaking to expose the indiscretion of one who is his own worst enemy. We would prefer to cover his frailties with the mantle of charity but our duty to those who have placed their health in our hands often compels us to remove from the field of medical activities an unsafe and dangerous practitioner.

CALIFORNIA BOARD

During the last ten years the Board of Medical Examiners of California have issued 198 citations. Of these forty-seven citations have been dismissed. Eighty-five licenses have been revoked; eight have been suspended and fifty-one have been placed on probation. During this time we have restored four licenses unconditionally and nine with probationary limitations. The courts have restored seven licenses. We have thus been reversed but seven times on writs of review. Such statistics are local and uninteresting except that they indicate a definite policy on the part of the California board to apply discipline in its fairest and broadest sense. Not only does discipline imply correction and punishment but education, instruction, training and culture. We hold that medical boards, not only from the standpoint of their licensing function but also because of their duty to maintain discipline, should take a lively interest in all matters of medical training and education.

INSTRUCTION IN ETHICS

Certain pitfalls in the path of the physician come too frequently to the attention of the boards to be lightly classed as individual cases without general application. Boards should call these to the attention of those whose duty it is to prepare the graduate in every way for an honorable and upright career. More impressive instruction in ethics should be given in the colleges. Code laws appertaining to medical practice are based on the established ethics of the profession as well as upon common law. The student should be thoroughly impressed with the fact that unless he has a desire and determination to pursue a true professional career his life will be without substance. It is kinder to separate an immoral candidate from his right to practice medicine before he earns a diploma than to leave it to a medical board to sidetrack a career when the time is past to choose another field less governed by moral standards.

MEDICAL BOARD SERVICE

Often when the zero hour comes during our work with the board we members ask ourselves the question: What does the board give us? The question should be what do we give the board? The board gives us an opportunity every man should grasp to assist in maintaining the moral and scientific standards of our profession. It is not a selfish employment. On the other hand neither is it a service that always brings from the public or our fellow physicians the praise that would be reward enough.

In the last analysis service on boards of medical examiners is perhaps our recognition of the fullest demand for service required by that oath we took when we enlisted in the healing art; "that it might be granted to us to enjoy life and the practice of the art, respected by all men in all time."

Farmers & Merchants Bank Building.

"TRAUMATIC HYDROCELE"*

WITH AN ANALYSIS OF THIRTY CASES

By MILEY B. WESSON, M. D.
San Francisco

DISCUSSION *by Otto R. Frasch, M. D., San Francisco; George W. Hartman, M. D., San Francisco; F. S. Dillingham, M. D., Los Angeles.*

INTRODUCTION

THE term "traumatic hydrocele" is as unscientific a misnomer as is "typhomalaria fever," and should likewise disappear from medical literature. Inflammation, with a resultant blocking of the lymphatics of the scrotum, is the cause of acute hydrocele, while low-grade infection, repeated slight traumas, or prolonged irritations may eventually result in a chronic hydrocele. However, when an enlarged scrotum is noticed, the insurance claimant eagerly remembers some slight injury to which he can attribute it, and generally a diagnosis of "traumatic" orchitis or hydrocele follows promptly.

Trauma and strains have become universal etiological factors for industrial lesions, and are comparable to some of the cultists' dislocated vertebrae and pinched nerves as the cause of all diseases, ranging from backache to hydrocele or hypertrophy of the prostate. The cultists overlook the fact that a vertebra cannot be dislocated, 1195 pounds of pressure crushing the neural arch and 800 pounds more pulverizing the body but leaving the articular surfaces unaffected, hence they have no difficulty in "making an adjustment,"

* Read before the Urological Section of the California Medical Association at its Fifty-Seventh Annual Session, April 30 to May 3, 1928.

precisely as some industrial surgeons are inclined to forget that no pathologist has yet been able to find any evidence of a connection between a strain and a hydrocele or tonsillitis.

Just as the etiological factors responsible for diseases began to be scientifically studied, political elements entered and the pendulum started to swing backward, with the result that trauma again came into its own with physiotherapy as its handmaid. Our scientific ideas of etiology have been subordinated to the questionable hypothesis of *"locus minoris resistentiae,"* with the result that there is a tendency to use only one industrial rule, to wit: The man was well and working, he suffered a trivial strain; now he cannot work, therefore, his strain or trauma was responsible for his arthritis, paresis, tuberculous epididymitis, hydrocele, or what not. Unfortunately the scientific urologists, for obvious reasons, only occasionally see industrial cases although such often present fascinating problems; and when they do are surprised to find that their opinions are usually brushed aside in favor of those of orthodox members of the trauma cult.

This article was prepared because nowhere could be found a series of case reports from which any deductions could be made as to the importance of trauma as an etiological factor in hydrocele. This paper is based upon a study of the literature, and upon thirty case reports—twenty-four from my files and six from the California Industrial Accident Commission, the latter representing all that have been passed upon by their medical department.*

SOME NOT VERY OLD VIEWPOINTS CONCERNING DISEASES

Scientific medicine is so young that the majority of us have lived in the day when the doctor was primarily interested in the treatment of diseases and not in their etiology and pathology. Necessarily, some of our present-day theories as to the causes of disease are still based on faith, but although we have all been medically raised, directly or indirectly, on the teachings of Adami's Pathology and Pepper's System of Medicine, we no longer believe that epidemic cerebrospinal meningitis is due to mental or bodily strain, drinking alcohol, exposure to extremes of heat or cold, homesickness, or checking perspiration. Neither do we believe that tabes is due to the jolting of a railroad train, the undue repetition of the sexual act, particularly in an upright position, or the use of alcohol and tobacco. We know that acute spinal meningitis is not due to violent bodily effort, and that malaria is not caused by "swamp poison" caught in the pans of milk exposed to night air. Jacobi, while accepting the theory that infantile paralysis was due to trauma, the mother walking too fast and dragging the child by one arm, thereby wrenching and pulling it violently, still could not understand why, in the great majority of cases, the lesion was situated in the lumbar cord. We know that tetanus is not the result of strain and as yet have not reaccepted traumatic cystitis as a recognized entity. Yellow fever was attributed to fomites and atmospheric impurities, and the *Stegomyia fasciatus* continued with its work while the city councils of the South financed "shotgun quarantines." Most of us remember the last big yellow fever epidemic in New Orleans when the United States mail was fumigated, the envelopes first being perforated so as to let out the miasmata. Twenty-six years ago yellow fever was endemic in Rio de Janeiro and ships from that port came in rock ballast to Brunswick, Georgia, for turpentine, etc. The United States Marine Hospital Service ordered Surgeon W. C. Hobdy to have the stones individually dipped into a tub of acidulated bichlorid of mercury solution before being carried ashore, and then the sides of the ship's hold had to be thoroughly washed with the same solution. Only a decade ago, no appendectomy report was considered complete unless the survivor remembered when he ate the blackberry jam or grapes; and many a woman with a cancer in the breast painted a vivid word picture of the time she was pinched or kicked by a nursing infant.

Naturally, today we are inclined to be amused by the recital of such etiology and therapy, but are we entitled to laugh? Although every medical student is taught that tabes and paresis are always the result of syphilis, last year the medical director of an eastern industrial accident commission decided that paresis is not necessarily caused by syphilis but might be the result of trauma. One of the universal, recognized, congenital anomalies is the undescended testicle and concomitant hernia, yet such has been legally found to be due to strain and not maldevelopment (Case 27).

ETIOLOGY

The relation of hydrocele, tuberculosis of the epididymis, and new growths of the testicle to injury is not clearly indicated although it is common to obtain a history of a blow on the testicles in these diseases. However, since every man has had his testicles more or less frequently traumatized there is danger of attributing to injury diseases of the testicles which were present before the injury was received and to which the accident merely called attention; the strain or blow being an eagerly remembered coincidence. R. G. Mills says: "As to the influence of indirect strains, I cannot conceive of any mechanism for the production of hydrocele even with the greatest stretch of imagination." W. G. MacCallum adds, "So much seems the result of tradition and more especially of the will to have it so, because it is an excuse for making the insurance people pay." The French school long since abandoned their theory of a spasmodic contraction of the cremaster muscle playing a part in the causation of hydrocele. Any inflammatory process which interferes with the lymphatic drainage of the tunica vaginalis may cause a hydrocele. Commonly an acute hydrocele is due indirectly to a seminal vesiculitis, and directly to an epididymitis. The course of an acute hydrocele corresponds to that of its

* The use of the medical records of the California Industrial Accident Commission is due to the courtesy of the medical director, Dr. Morton R. Gibbons.

cause. It tends to recover as the primary disease improves, and becomes chronic as the cause persists. It is possible for the exciting factor to entirely disappear, however, and leave behind it a persistent hydrocele.

Gonorrhea or tuberculosis of the epididymis are the two infections which most often produce symptomatic hydrocele. The former causes a very acute type, while the latter tends to a more chronic course. In the absence of any genital focus it is possible for a blood-borne infection to be responsible for the inflammatory blocking of the scrotal lymphatics. Chronic hydrocele is also caused directly by infections of the pneumococcus, colon bacillus, typhoid, spirochaeta pallida, and indirectly by erysipelas, rheumatism, and neoplastic growths. Injuries at birth have been held responsible for certain cases of congenital hydrocele, and repeated slight traumas undoubtedly result in a low-grade inflammation and infusion, as demonstrated by the frequency of chronic hydrocele among circus riders and bicycle riders. Chronic inflammation, with or without bacteria present, favors the production of serum; consequently, it is possible for fluid to accumulate as the result of trauma alone, exactly as it does in a knee that has been injured. However, due to a previous injury, conditions are produced that favor the collection of fluid very rapidly under subsequent trauma when the degree of injury may be much less than that required in the first instance.

Chronic irritation of the local circulation is the probable causative factor of the idiopathic cases of the tropics commonly attributed to loose clothing or sexual excesses, both of which tend to hyperemia and formation of serous exudate. Filaria and bilharzia have frequently been indicted, but never convicted. Occasionally a transitory hydrocele may be due to the peritoneal vaginal process remaining open so that the cavity of the tunica vaginalis communicates with the abdominal cavity. Somewhat more frequently the obliteration of the process is not complete so that various portions of it persist, thereby forming types of hydrocele of the cord. Recent statistics have noted the occurrence of an unusually large number of hydroceles following the resecting of veins in varicoceles, or transplantation of the cord in herniotomies, due to the blocking of lymphatics.

Negative histories of venereal diseases are valueless. It was recognized as an axiom by doctors of past generations that most men would admit a history of syphilis but deny that of gonorrhea, whereas at the present time the workman is prone to deny both, particularly if he has had experience with the old-time "company doctor" who was reputed to attempt to attribute all injuries to venereal diseases, thereby converting them into private cases, such not being covered by his contract. Because of this workman's "viewpoint" a seminal vesicle examination should be routinely made in all cases. If infection is found and there is no history of gonorrhea, in order to complete the record, a careful sexual history should be taken, as admitted abnormalities may furnish a reason for the prostatitis. A nonvenereal prostatitis is much more resistant to treatment than one due to gonorrhea.

PATHOLOGY

Inflammation is the local reaction to injury, and it is not always the result of bacterial activity although such is the common cause of acute conditions. Hence, anything which causes local injury to the tissues is a cause of inflammation, be it a mechanical trauma, physical insult (by heat, cold, or electricity), disturbances of altered metabolism and abnormal internal secretion, or bacterial or microbic invasion and growth.

A contusion causes rupture of capillaries with a greater escape of blood into the parts. The fluid and parts of the corpuscles are drained away by the lymphatics, the mass of corpuscles, being out of place, degenerate, their hemoglobin dissolves out and undergoes a series of reactive processes characterized by the color changes of the "black eye." Eventually the leukocytes carry away the débris and the parts return to normal.

In ordinary trauma there is (1) pain, which is increased by motion; (2) loss of function with swelling beneath deep fascia; and (3) discoloration, which will appear probably at once because of injury to superficial structures. *Ocular evidence of trauma, such as ecchymosis, should always be present at the time of an injury that is alleged to result in a hydrocele,* and even then, at best, trauma is only the aggravation factor and not the cause of the hydrocele.

SYMPTOMATOLOGY

The symptoms of acute hydrocele depend upon the virulence of the infecting agent. Pain may be present or absent. In acute gonorrheal epididymitis the exudate is nature's attempt to protect the diseased part from outside injury. It is possible that the tension of the complicating hydrocele may be responsible for part of the severe pain, as occasionally marked relief follows the release of the pressure. The hydrocele accompanying tuberculous epididymitis, on the contrary, rarely causes any discomfort. The symptoms that cause the patients to seek relief are the pain of the epididymitis, or the cosmetic deformity of the tumor.

TREATMENT

The treatment is usually palliative if the causative infection runs a short and acute course, and the amount of fluid is small. With rest, elevation of the scrotum and hot moist dressings, the effusion may be left to absorb. Severe pain with considerable fluid demands aspiration, and this will probably have to be repeated as the effusion tends to reform quickly. If tapping is done, careful palpatory examination should be made at once to determine whether epididymitis or malignancy is responsible. When the fluid fails to be absorbed after some weeks, the hydrocele is considered chronic. In such cases where there is no pain, relief may eventually be sought because of the cosmetic deformity. Various drugs have been injected into the empty sac, the most common being tincture of iodin or phenol followed by an alcohol irrigation. Theoretically the epithelial lining of the sac is destroyed so that the walls will adhere

TABLE 1.—*Analysis of Thirty Cases of "Traumatic Hydrocele"*

No.	Case No.	Age	History of Venereal Disease	Alleged Etiology	Findings	Comment
1	121	55	0	Left hydrocele, strain, 6 yrs. ago.	Right spermatocele, left hydrocele, prostatitis and seminal vesiculitis.	Chronic left epididymitis, Aspiration: 7-8-26—450 cc. 1-26-27—300 cc. 12-27-27—350 cc. Injected 3cc. 5% "220," Cure
2	197	60	0	Blow in groin.	3 successive scrotal operations: Hydrocele of cord (?). Gumma and cellulitis (?). Sarcoma (?) and exitus on operating table.	All surgery and no diagnosis; a questionable industrial case. Death claim paid.
3	263	31	Gonorrhea 20	Swollen testicle following straining at stool 40 days ago.	Prostatitis and seminal vesiculitis. Left epididymitis and hydrocele.	
4	269	25	Gonorrhea 15	Strain from lifting, on following morning hydrocele appeared.	Prostatitis and seminal vesiculitis. Left epididymitis, Bilateral hydrocele.	Rejected.
5	283	50	0	Foot slipped seven days ago.	Prostatitis and seminal vesiculitis. Bilateral epididymitis and hydrocele.	Rejected.
6	302	68	0	Horseback riding, pain in right groin, 2 years ago, swelling began 7 months ago.	Right hydrocele.	Aspiration: 11-21-23—300 cc. 4-22-24—500 cc. 4-29-24—400 cc. Radical operation
7	396	47	0	Blow in groin.	Large left hydrocele; small right hydrocele (not known to patient). Prostatitis and seminal vesiculitis.	(Accepted) Radical operation 12-3-24
8	640	36	0	Blow on testicle 10 days ago. Similar swelling 1 year ago.	Left hydrocele. Prostatitis and seminal vesiculitis.	Left epididymitis found when 140cc. of hydrocele fluid withdrawn. After hospitalization 1 mo. right epididymitis followed walk of 1 block.
9	670	38	0	"Slipped on top of mountain and rolled to bottom"—hydrocele 3 weeks later.	Right hydrocele.	Aspiration—500 cc. Radical operation.
10	803	57	0	Industrial claims in 1907, 1918, 1923 and 1924. Struck scrotum, and hydrocele followed.	Left hydrocele. Prostatitis and seminal vesiculitis, left hernia.	Rejected.
11	847	30	Syphilis 17 Gonorrhea 19 22, 28	Three days previous lifted 100 lb. weight, turned suddenly, pain in right testicle.	Right hydrocele. Prostatitis and seminal vesiculitis, bilateral chronic epididymitis.	Double herniotomy at 22, followed by right epididymitis.
12	855	58	0	Blow on testicle 5 years ago, hydrocele followed. 10 x 6 cm.	Left hydrocele. Prostatitis and seminal vesiculitis. Stony hard nodule-carcinoma (?) in prostate.	
13	907	23	0	Dec. 13, 1926, lifted a weight and immediate pain in right groin, 3 days later scrotum size of an orange.	Right hydrocele. Prostatitis and seminal vesiculitis. Left hernia.	(Accepted) Radical operation; right hydrocele, small left hernia.
14	1079	36	Gonorrhea 17	1920 right herniotomy; 9-23-25 fell astride bar, hydrocele followed. 11-24-25 aspirated 6 oz. 3-12-27 aspirated 2 oz.	Prostatitis and seminal vesiculitis. Right testicle 10 x 6 cm. Right hernia.	11-4-27 Radical operation; right herniotomy and orchidectomy.
15	1107	63	0	Blow in right groin 4-4-27.	Right hydrocele (20 yrs. duration). Prostatitis and seminal vesiculitis. Tbc. left pubis with sinus in right hydrocele wound. Tbc right epididymis with sinus.	5-10-27 Radical hydrocele (family physician). 3-14-28 Exitus, pulmonary tbc.

No.	Case No.	Age	History of Venereal Disease	Alleged Etiology	Findings	Comment
16	1240	47	0	Strain of lifting.	Right hydrocele. Prostatitis and seminal vesiculitis.	(Rejected) Radical operation 1-16-28
17	Dr. Kimberlin's case	32	0	Walking up and down stairs and crawling into show windows; no trauma. Swelling on May 1926.		(Rejected) Radical operation 6-13-26. Thick sac. Epididymis negative (?)
18	329	29	Gonorrhea 26 Syphilis 20	Jolting from truck.	Epididymis negative. Prostatitis and seminal vesiculitis; bilateral hydrocele, small.	(Rejected)
19	719	26	Gonorrhea 20	Trauma of groin, 1 year previous.	Urine staphylococcus. L. globus major 2 in. in diameter; left vasitis.	(Rejected) 6-3-26 operation radical hydrocele. Family physician reported subcutaneous tissues of scrotum were congested; tunica vaginalis contained bloody fluid.
20	1002	22	0	1 mo. previous left foot broke through snow crust.	L. tbc. epididymitis. R. epididymitis. Urine, staphylococcus. Inguinal rings tight.	Case accepted as hernia, then large hydrocele appeared and was tapped. 6-18-27 left epididymectomy. (tbc.)
21	1008	54	Gonorrhea 30	"Foot slipped."	Bilateral hydrocele. Chr. prostatitis and seminal vesiculitis. Direct inguinal hernia; median bar.	
22	1036	48	0	Lifting.	Left hydrocele. Left epididymitis. Chr. prostatitis and seminal vesiculitis.	
23	1099	57	0	Trauma to right testicle 6 mos. previous. Hydrocele tapped 5 times.	Right testicle, 6x4"	8-31-27 Right orchidectomy; organized hematocele.
24	1186	46	Gonorrhea 20 23	Jumped 4½ feet to ground. 3 days later right epididymitis. 26 days later hydrocele—aspiration, 300 cc.	Right tbc. epididymitis. Prostatitis and seminal vesiculitis.	Right tecticle swollen at age of 10. Past 4 yrs. confined to tbc. sanatorium.
25	*IAC 20031 5-28-26	54	0	Right herniotomy 8-20-22; recurrent right herniotomy Dec., 1922. Scrotal swelling began immediately, surgeon thought it due to buried catgut; then left hernia appeared.		Commission asked: Did the hydrocele have any relation to accident which caused recurrence of hernia? Ruled it did not, "as hydrocele is so common independently of hernia and is so rare following hernia." Awarded — Radical operation.
26	*IAC 1044 3-29-15	?	?	14 ft. ladder slipped from under him. Swelling of scrotum began on following day and after 3 hours it was 12x10". Several years before injured same testicle riding horseback. At time of fall had planned for operation on left varicocele — due to strain.		Commission ruled: "Take nothing."
27	*IAC	17	?	Lifted crate of eggs and felt pain in left groin.	Op. 2-2-26. Left cryptorchism; atrophic testicle partially undescended; hydrocele of cord; posterior to which was a left inguinal hernia; sac contained omentum.	Commission ruled: Liable. Traumatic hernia because wall of hernia was thin, omentum was non-adherent and there were no external adhesions.

(Continued on next page)

*Industrial Accident Commission.

(Continued from previous page)

No.	Case No.	Age	History of Venereal Disease	Alleged Etiology	Findings	Comment
28	*IAC 8001 6-8-20	51	Gonorrhea 31	Frequent attacks of cystitis, 3 in preceding 5 mos. For 5 years lump size of walnut in epididymis. Twisted back. No heavy lifting. Testicle sore that night, four times normal size in morning.	Hydrocele for 20 yrs. that would become sore and enlarge whenever he did heavy work.	Commission ruled: Lifting and carrying a heavy door caused an exacerbation of preëxisting quiescent an exacerbation of hydrocele. Op. April, 1920.
29	*IAC (L. A.) 1077 4-10-15	18	?	Fall from bicycle. (One brother operated at 13 for hydrocele due to bicycle riding.)	Fell from bicycle in race 1913. Thrown on car track Jan. 1914, and August 1914. Double hydrocele 5x1½".	Commission ruled: Take nothing. Op. 10-8-15.
30	*IAC 17585 12-27-24	26	?	Struck scrotum with auto crank.	April 1925, left hydrocele tapped twice. Bilateral epididymitis. tbc(?) 4-29-25 Bilateral epididymectomy. Pathology: Chronic inflammation and not tuberculosis.	"The epididymitis has been aggravated by the trauma of his occupation and the right side is definitely secondary to the trouble on the left. (Urological consultant). Ruling: Total temporary disability, traumatic bilateral epididymitis.

*Industrial Accident Commission.

and the cavity be obliterated, but as a rule this is not complete and there is formed a lobulated sac with partitions of scar tissue. Unfortunately such treatment is generally followed by a painful recrudescence of the epididymitis. Five per cent mercurochrome-220 is the most satisfactory drug to use as it is painless, not causing epididymitis, and the result is apparently either an immediate cure or a frank failure. Tapping is justified in old men but rarely in young. However, the only satisfactory scientific way to handle a hydrocele is to first cure the underlying condition responsible for the blocking of the lymphatics and then surgically remove the sac that holds the dammed-up fluid.

REPORT OF CASES

The material used in this study consists of twenty-four private and industrial cases seen in consultation before or after operation, and the records of six in the files of the California Industrial Accident Commission. An analysis of the thirty cases of so-called traumatic hydroceles shows:

Age.—From ages 17 to 68.

Venereal History.—Nine admitted a gonorrheal history, 16 denied all venereal diseases, and five were not asked. Twenty-one had rectal examinations made, and in all cases clumps of pus were expressed from the prostate and seminal vesicles.

Alleged Etiology.—Trauma to testicle, 8; trauma to groin, 4; straining at stool, 1; strain of lifting, 7; "foot slipped," 2; rolled down mountainside, 1; horseback riding, 1; riding on truck, 1; bicycle riding, 1; strain of continually walking up and down stairs, 1; strain of jumping, 1; unknown, 2. (Five thought that previous hernia operations might have had some effect.)

Etiology.—

Prostatitis and seminal vesiculitis	17
Chronic irritation:	
(a) Horseback riding	2
(b) Bicycle riding	1
Sarcoma	1
Herniotomy	1
Tuberculous epididymitis	3
Cryptorchism	1
Hematocele	1
Unknown (no genito-urinary examination made)	3
Trauma	0

SUMMARY

1. Hydrocele is due to an inflammatory blocking of the draining lymphatics, secondary to disease of the scrotal contents.

2. There is no authority, or even inference of knowledge, that entitles one to attribute the cause of any disease to trauma, and *whenever trauma is offered as the cause of a disease the proponent should prove his claim, and this cannot be done without substituting faith for science.*

3. As urologists we are not interested in the spread of socialistic medicine by state agencies, nor any arguments as to the justice or racial benefits of same, but we are vitally concerned in keeping honest the etiology of diseases as worked out by this and preceding generations.

4. Unfortunately the industrial accident rulings are made by laymen, and in a recent report of a commission great credit is claimed for the number of sick and injured individuals brought within the fold of this remedial legislative act by "ingenuous theory and broad interpretation." When

did it become necessary for laymen to advance medical theories?

5. Recognized pathological postulates and not politico-medico-legal rulings of industrial accident commissions should decide the causes of diseases.

6. Expediency and economic factors encourage a tendency of the industrial surgeon to ignore the fundamental underlying infection and to emphasize strains or bruises and the long discredited hypothesis of *"locus minores resistentiae"* whenever a workman complains of a sore back or swollen testicle, or even a gonorrheal urethritis.

7. Thirty case reports of "traumatic hydrocele" were analyzed, and the only one clearly due to acute trauma was a hematocele, while chronic irritation (horseback and bicycle riding) was probably responsible for three cases. Epididymitis secondary to seminal vesiculitis was the common cause, the trauma merely calling attention to a predestined developing condition.

490 Post Street.

DISCUSSION

OTTO R. FRASCH, M. D. (315 Montgomery Street, San Francisco).—The dividing line between accident and disease as a cause of a pathologic condition present is rather vague in many cases. Since an increasingly large number of people now receive monetary compensation in some form for accidental injuries—which they do not receive if the condition is due to the effects of disease—an attempt to determine more definitely the etiology of such cases is desirable.

Hydrocele is a condition which the patient usually attributes to some direct or indirect trauma. He is frequently supported in his claim by his attending physician, who in many cases has attached considerable importance to the patient's story of trauma and has omitted to secure a complete urological examination. No satisfactory explanation of the mechanism by which a hydrocele may form following indirect trauma, such as the strain of lifting or slipping, has been offered. Direct trauma, independent of disease, would have to be of sufficient violence to produce a hematoma within the tunica vaginalis, and such a trauma would produce external visible signs of violence at the time of injury and be accompanied by severe subjective symptoms. The injured person usually, however, gives a history of a relatively minor trauma, and when the report of a physician who saw him soon after the accident is available there is usually no mention of external visible evidence of severe violence. A more complete urological examination in such cases will practically always reveal an underlying epididymitis and prostatitis. The degree to which trauma may aggravate a disease condition is difficult to determine. Given the disease condition, the hydrocele may develop without the trauma, and a hydrocele of any size naturally makes the parts more susceptible to injury.

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GEORGE W. HARTMAN, M. D. (999 Sutter Street, San Francisco).—Consideration of the speaker's data immediately impresses one with the fact that the majority of patients whose presenting complaint was hydrocele had prostatitis and seminal vesiculitis as well. In nine instances this was secondary to gonorrhea. In the few cases not traceable to these causes there were other conditions, such as tuberculosis, sarcoma, and undescended testicle. This series of cases, though small, represents a cross section of the hydroceles which present themselves in practice, and I believe that the author has made his point that the condition is not caused by trauma alone.

Hydrocele is one of the most frequent conditions met in operative urology. It is surprising, in consideration of the number of posterior urethral infections which exist, that it is not seen more often.

Recent study has shown a surprising frequency for infections of teeth, tonsils, nasal passages, and other parts of the body to metastasize in the prostate and seminal vesicles and exist thereafter, unrecognized for prolonged periods, until a careful routine examination discloses them. It is quite possible, under these circumstances, that a mild chronic epididymitis may be produced. In 90 per cent of the hydroceles exposed, the epididymis is found to be the seat of acute or chronic infection. The hydrocele itself may develop slowly and be accentuated by a trauma. Even the so-called traumatic hydrocele of the horseback rider may be secondary to infections elsewhere which, unrecognized in the past, have aroused the suspicion of venereal infection.

Attention is called to the fact that not all chronic epididymites give rise to hydrocele. On the other hand, there are many cases of trauma reported in which there is no hydrocele produced. Should the trauma be sufficient to cause a hemorrhage, one would expect all of the accompanying signs and symptoms.

The question still remains to be settled whether, in the presence of a chronic infection in the prostate and seminal vesicles, an injury causing temporarily great increase in intra-abdominal pressure would be sufficient to carry infection downward, causing epididymitis and subsequent hydrocele. Instances of this sort have been observed.

The postoperative enlargement of the scrotal contents, due to the excision of the hydrocele sac, may be reduced rapidly by the application of diathermy. Hydrocele appearing after operation for hernia or varicocele usually disappears after one or two tappings.

The speaker's work is well timed. Medicine marches on progressively through error into scientific fact. At times it is almost as difficult to convince the medical as the lay public, but ultimately the truth will prevail.

❦

F. S. DILLINGHAM, M. D. (320 Merchants National Bank Building, Los Angeles).—The essayist has given us a complete description of hydrocele, covering every phase from history, etiology, pathology, symptomatology and treatment.

I was particularly pleased that he mentioned metastatic infections. So many recognize gonorrhea or tuberculosis as the underlying cause, but are not aware or will not admit that infections of the prostate, vesicles, or epididymis may be caused by some focus.

Szenkier reports an abscess of the prostate in a boy two and a half years old following typhoid fever. Trauma from the rough passage of urethral instruments has caused many a case of epididymitis.

My experience with insurance companies and others is that they blame the gonococcus when the microscope and cultures show only staphylococcus infection.

The original infection may have occurred years before and, causing no symptoms, be forgotten until one of the forms of trauma described in the paper supposedly causes a hydrocele. In every patient operated for varicocele, as a prophylactic, I believe it wise to operate the tunica vaginalis also so as to avoid the possibility of a hydrocele later.

As has been brought out by others, many severe blows on uninfected testicles (as in the game of handball) are not followed by epididymitis or hydrocele, while it usually follows if the student gives a history of past infection.

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DOCTOR WESSON (Closing).—The discussion has emphasized three points: (1) Nonvenereal (metastatic) prostatitis is very common but generally overlooked because the prostate is not investigated in the absence of a history of gonorrhea. (2) Ingrained medical folklore is often as hard to eradicate from the physician's mind as from the layman's. (3) Hydrocele is not due to trauma, but to infection.